

STN 5/13/03

Set	Items	Description
S1	1785	PCIB OR CHLOROPHENOXYISOBUTYRIC OR TIBA OR TRIIODOBENZOIC - OR ANTI (W) AUXIN
S2	13116	SOMATIC (W) EMBRYO?
S3	62	S1 AND S2
S4	41	RD (unique items)
S5	4275585	PY=2000:2003
S6	33	S4 NOT S5
S7	8	EMBRYOGENIC (W) CELL (W) MASS
S8	0	S6 AND S7
S9	284985	MATUR?
S10	8	S6 AND S9
? t s10/9/1-5, 6		

10/9/1 (Item 1 from file: 5)
DIALOG(R) File 5: Biosis Previews (R)
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11793479 BIOSIS NO.: 199900039588

Somatic embryogenesis and plant regeneration in callus culture
of tef, *Eragrostis tef* (Zucc.) Trotter.

AUTHOR: Kebebew A; Gaj M D(a); Maluszynski M

AUTHOR ADDRESS: (a) Dep. Genet., Silesian Univ., Jagiellonska 28, 40-032
Katowice**Poland

JOURNAL: Plant Cell Reports 18 (1-2):p154-158 Nov., 1998

ISSN: 0721-7714

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: The study was carried out to establish in vitro culture conditions for plant regeneration of tef, *Eragrostis tef* (Zucc.) Trotter. **Mature** seeds of two Ethiopian varieties, DZ-01-354 and DZ-01-196, were used to initiate callus cultures on Murashige and Skoog (MS) medium with different auxins. Four- and 8-week-old calli induced on a medium with 2.0 mg/l 2,4-dichlorophenoxyacetic acid (2,4-D) were subcultured onto various media to induce **somatic embryogenesis**. Compact, nodulated, embryogenic callus was observed after transfer onto MS-callus proliferating (CP) medium. Embryogenic tissue appeared on soft and amorphous callus and developed into **somatic embryos** during a subsequent subculture to MS embryo-promoting (EP) media. Various growth regulator combinations were tested in CP and EP media to obtain a high efficiency of **somatic embryo** formation. The highest frequency of calli forming **somatic embryos** (56.1-68.3%) was observed when CP media with 2.0 or 4.0 mg/l 2,3,5-**triodobenzoic** acid were employed and then cultures were transferred to EP media with 0.5 mg/l 2,4-D and 0.5 mg/l kinetin followed by 0.5 mg/l indole-3-acetic acid and 0.5 mg/l N6-benzyladenine. Plant development from **somatic embryos** was obtained on MS medium supplemented with 1.0 mg/l gibberellic acid. On average, 71.2% of calli displaying **somatic embryos** converted into plants. Regenerated plants were successfully transferred to soil. Neither chlorophyll-deficient plants nor morphological variants were found among regenerants. All regenerated plants were fertile.

REGISTRY NUMBERS: 87-51-4: IAA; 86-87-3Q: NAPHTHALENEACETIC ACID;
26445-01-2Q: NAPHTHALENEACETIC ACID; 94-75-7: 2 4-D

DESCRIPTORS:

MAJOR CONCEPTS: Agronomy (Agriculture); Methods and Techniques

BIOSYSTEMATIC NAMES: Gramineae--Monocotyledones, Angiospermae,
Spermatophyta, Plantae

ORGANISMS: *Eragrostis tef* {tef} (Gramineae)--grain crop

Dicots

10/9/6 (Item 6 from file: 5)
DIALOG(R) File 5: Biosis Previews(R)
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06068204 BIOSIS NO.: 000085031353
EMBRYOGENIC CALLUS INDUCTION AND PLANT REGENERATION FROM CULTURED
HORDEUM-VULGARE **MATURE** EMBRYOS
AUTHOR: RENGEL Z
AUTHOR ADDRESS: DEP. PLANT NUTRITION, FAC. AGRIC. SCI., UNIV. ZAGREB,
SIMUNSKA 25, 41 000 ZAGREB, YUGOSLAVIA.
JOURNAL: PLANT PHYSIOL BIOCHEM (PARIS) 25 (1). 1987. 43-48. 1987
FULL JOURNAL NAME: Plant Physiology and Biochemistry (Paris)
CODEN: PPBIE
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: A non-embryogenic callus was induced on *Hordeum vulgare* **mature** embryos cultured on modified Murashige and Skoog's (MS) medium supplemented with different concentrations of 2,4-dichlorophenoxyacetic acid. After non-embryogenic calli were subcultured on the media of the same compositions as in the primary culture, an embryogenic callus tissue was formed. **Somatic embryoids** appeared on the surface of the embryogenic calli. The structure of some of them resembled zygotic cereal embryos. Green plants were developed from **somatic embryoids** on the regeneration medium (modified MS completed with 3 .mu.M 2,3,5-**triiodobenzoic** acid). Following establishment of vigorous root systems, plants were transferred into soil and grown to the **maturity**. The influence of the genotype on the tissue culture of cereals is discussed.

DESCRIPTORS: 2 4-D 2 3 5 **TRIIODOBENZOIC** ACID TISSUE CULTURE

CONCEPT CODES:

11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971-)
32500 Tissue Culture, Apparatus, Methods and Media
51510 Plant Physiology, Biochemistry and Biophysics-Growth, Differentiation
51512 Plant Physiology, Biochemistry and Biophysics-Reproduction
52504 Agronomy-Grain Crops
25508 Developmental Biology-Embryology-Morphogenesis, General
51000 Morphology, Anatomy and Embryology of Plants

BIOSYSTEMATIC CODES:

25305 Gramineae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Plants
Vascular Plants
Spermatophytes
Angiosperms
Monocots

?

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): Angiosperms; Monocots; Plants;
Spermatophytes; Vascular Plants
CHEMICALS & BIOCHEMICALS: IAA--plant growth regulator; NAA (
naphthaleneacetic acid)--plant growth regulator; 2,4-D--plant growth
regulator
METHODS & EQUIPMENT: callus culture--Murashige and Skoog medium, culture
method
CONCEPT CODES:
52504 Agronomy-Grain Crops
32500 Tissue Culture, Apparatus, Methods and Media
51510 Plant Physiology, Biochemistry and Biophysics-Growth,
Differentiation
51524 Plant Physiology, Biochemistry and Biophysics-Apparatus and
Methods
BIOSYSTEMATIC CODES:
25305 Gramineae

10/9/2 (Item 2 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
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11138862 BIOSIS NO.: 199799760007
Direct **somatic embryogenesis** and plant regeneration from
mature sugarbeet (*Beta vulgaris* L.) zygotic cotyledons.
AUTHOR: Kulshreshtha S; Coutts R H A(a)
AUTHOR ADDRESS: (a)Dep. Biol., Imperial Coll. Sci., Technol. Med., Prince
Consort Road, London SW7 2BB**UK
JOURNAL: Plant Growth Regulation 22 (2):p87-92 1997
ISSN: 0167-6903
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: An in vitro protocol has been developed for direct **somatic
embryogenesis** of zygotic cotyledons from **mature** sugarbeet
(*Beta vulgaris* L.) embryos. Explants were sequentially cultured on
modified Murashige and Skoog (MS) medium supplemented with different
combinations of 2,4-D, NAA, BAP and **TIBA**. **Somatic
embryogenesis** was induced within 4 weeks of culture on
embryogenesis induction medium which contained MS medium supplemented
with BAP and **TIBA**. Proliferation of **somatic embryos** was
observed on embryo proliferation medium, which contained MS medium
supplemented with BAP and NAA within 4 weeks of culture. Plants were
regenerated on hormone free 1/2 strength MS medium containing a low
sucrose concentration. With some sugarbeet lines, high frequencies of
plant regeneration in excess of 90% were observed. The incorporation of
TIBA in the media was essential for successful regeneration.

REGISTRY NUMBERS: 88-82-4: 2 3 5-**TRIODOBENZOIC ACID**; 86-87-3Q:
NAPHTHALENEACETIC ACID; 26445-01-2Q: NAPHTHALENEACETIC ACID; 1214-39-7:
BENZYLAMINOPURINE; 94-75-7: 2 4-D

DESCRIPTORS:
MAJOR CONCEPTS: Chemical Coordination and Homeostasis; Development;
Methods and Techniques
BIOSYSTEMATIC NAMES: Chenopodiaceae--Dicotyledones, Angiospermae,
Spermatophyta, Plantae
ORGANISMS: sugarbeet (Chenopodiaceae); *Beta vulgaris* (Chenopodiaceae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): angiosperms; dicots; plants;
spermatophytes; vascular plants
CHEMICALS & BIOCHEMICALS: 2,3,5-**TRIODOBENZOIC ACID**;
NAPHTHALENEACETIC ACID; BENZYLAMINOPURINE; 2,4-D
MISCELLANEOUS TERMS: Research Article; BAP; BENZYLAMINOPURINE; CHEMICAL

COORDINATION; COTYLEDONS; DEVELOPMENT; METHODOLOGY; MURASHIGE AND SKOOG
MEDIUM; NAA; NAPHTHALENEACETIC ACID; PLANT GROWTH REGULATOR; PLANT
REGENERATION; PROPAGATION METHOD; **SOMATIC EMBRYOGENESIS**;
TIBA; TISSUE CULTURE; ZYGOTIC; 2,3,5-**TRIIODOBENZOIC** ACID;
2,4-D

CONCEPT CODES:

32500 Tissue Culture, Apparatus, Methods and Media
51510 Plant Physiology, Biochemistry and Biophysics-Growth,
Differentiation
51514 Plant Physiology, Biochemistry and Biophysics-Growth Substances
51524 Plant Physiology, Biochemistry and Biophysics-Apparatus and
Methods

BIOSYSTEMATIC CODES:

25795 Chenopodiaceae

10/9/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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10157493 BIOSIS NO.: 199698612411

Somatic embryogenesis from integument (perisperm) cultures of
coffee.

AUTHOR: Sreenath H L(a); Shanta H M; Babu K Harinath; Naidu M M
AUTHOR ADDRESS: (a)Tissue Cult. Div., Coffee Board, Manasagangothri, Mysore
570 006, Karnataka**India
JOURNAL: Plant Cell Reports 14 (10):p670-673 1995
ISSN: 0721-7714
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: **Somatic embryogenesis** was induced in integument
(perisperm) cultures of C times R hybrid cultivar of coffee, after a
culture period of 15 months, using a sequence of 3 modifications of MS
medium. Vigorously growing soft, white, watery crystalline calli were
obtained on MS + **TIBA** (1 mg/l) + L-cysteine HCl (50 mg/l) + PVP
(100 mg/l). After 43 d, the calli were subcultured to MS + IAA (0.5 +
mg/l) + 2,4-D (0.05 mg/l) + Kn (8.6 mg/l) and maintained for the next 9
months without any transfer. On this medium, the callus proliferation was
initially vigorous which slowed down after 5-6 months, and then the calli
turned light brown and somewhat compact. Later, when the calli were
transferred to MS + thiamine HCl (10 mg/l) + pyridoxine HCl (3 mg/l) +
nicotinic acid (2 mg/l) + 2,4-D (0.2 mg/l) + 2ip (2.5 mg/l) and cultured
for 2 months, they turned darker, more compact and the proliferation
almost stopped. These calli were subcultured onto fresh medium of the
same composition. After another 2 months of culture cream-coloured,
highly friable, embryogenic calli appeared, which in turn produced a few
clearly identifiable SEs in another 1 month. Further proliferation and
maturation of SEs was achieved by culturing the embryogenic calli
on MS + ABA (1 mg/l) for 3 months. The SEs were germinated into 2 cm tall
plantlets after 2-3 subcultures, each of 2 months duration on 1/2-MS + Kn
(0.1 mg/l).

REGISTRY NUMBERS: 87-51-4: IAA

DESCRIPTORS:

MAJOR CONCEPTS: Cell Biology; Chemical Coordination and Homeostasis;
Development; Methods and Techniques
BIOSYSTEMATIC NAMES: Rubiaceae--Dicotyledones, Angiospermae,
Spermatophyta, Plantae
ORGANISMS: Rubiaceae (Rubiaceae)
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): angiosperms; dicots; plants;

spermatophytes; vascular plants
CHEMICALS & BIOCHEMICALS: IAA
MISCELLANEOUS TERMS: CALLUS PROLIFERATION; GERMINATION; IAA
CONCEPT CODES:
02504 Cytology and Cytochemistry-Plant
32500 Tissue Culture, Apparatus, Methods and Media
51510 Plant Physiology, Biochemistry and Biophysics-Growth,
Differentiation
51514 Plant Physiology, Biochemistry and Biophysics-Growth Substances
51524 Plant Physiology, Biochemistry and Biophysics-Apparatus and
Methods
10060 Biochemical Studies-General
25508 Developmental Biology-Embryology-Morphogenesis, General
BIOSYSTEMATIC CODES:
26680 Rubiaceae

10/9/4 (Item 4 from file: 5)
DIALOG(R) File 5:Biosis Previews(R)
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08002012 BIOSIS NO.: 000093057685
FACTORS AFFECTING MORPHOGENESIS FROM IMMATURE COTYLEDONS OF
PHASEOLUS-COCCINEUS L
AUTHOR: GENGA A; ALLAVENA A
AUTHOR ADDRESS: ISTITUTO SPERIMENTALE PER L'ORTICOLTURA, VIA PAULLESE 28,
20075 MONTANASO L., ITALY.
JOURNAL: PLANT CELL TISSUE ORGAN CULT 27 (2). 1991. 189-196. 1991
FULL JOURNAL NAME: Plant Cell Tissue and Organ Culture
CODEN: PTCED
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Direct **somatic embryogenesis** as well as **somatic embryogenesis** and organogenesis mediated by small glossy calluses were obtained from immature cotyledon explants of bean (*P. coccineus*) cv Streamline 770 on a modified half-strength MS medium (Murashige & Skoog 1962) containing various concentrations of (2-isopentenyl)adenine and 2-naphthoxyacetic acid. Substitution of sucrose with glucose gave, in the range of concentrations tested, the strongest enhancement of the morphogenic process. Further improvement regarding the number of morphogenic cotyledons, the number of regenerations per cotyledon and the quality of the embryos was observed when 2,3,5-**triiodobenzoic** acid or abscisic acid were added to the medium. After cycles of micropropagation on MS medium plus 4.4 μ M 6-benzyladine and rooting in the absence of growth factors, plantlets were adapted to ex vitro conditions and grown to **maturity**.

DESCRIPTORS: 2 ISOPENTENYLADENINE 2 NAPHTHOXYACETIC ACID 2 3 5
TRIIODOBENZOIC ACID ABSCISIC ACID 6 BENZYLADENINE **SOMATIC**
EMBRYOGENESIS ORGANOGENESIS REGENERATION

CONCEPT CODES:
13220 Nutrition-Carbohydrates (1972-)
51000 Morphology, Anatomy and Embryology of Plants
51504 Plant Physiology, Biochemistry and Biophysics-Nutrition
51510 Plant Physiology, Biochemistry and Biophysics-Growth,
Differentiation
51512 Plant Physiology, Biochemistry and Biophysics-Reproduction
51514 Plant Physiology, Biochemistry and Biophysics-Growth Substances
10060 Biochemical Studies-General
10066 Biochemical Studies-Lipids
10068 Biochemical Studies-Carbohydrates

BIOSYSTEMATIC CODES:

26260 Leguminosae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Plants

Vascular Plants

Spermatophytes

Angiosperms

Dicots

10/9/5 (Item 5 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

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06259126 BIOSIS NO.: 000086093309

MICROAMPUTATION OF **SOMATIC EMBRYOS** OF THE DOMESTIC CARROT

REVEALS APICAL CONTROL OF AXIS ELONGATION AND ROOT REGENERATION

AUTHOR: SCHIAVONE F M

AUTHOR ADDRESS: PLANT DEV. LAB., DEP. BOTANY, UNIV. MARYLAND, COLLEGE PARK,
MD. 20742, USA.

JOURNAL: DEVELOPMENT (CAMB) 103 (4). 1988. 657-664. 1988

FULL JOURNAL NAME: DEVELOPMENT (Cambridge)

CODEN: DEVPE

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

ABSTRACT: Somatic heart- and torpedo-stage embryos of the domesticated carrot, *Daucus carota* L., were severed at their midlengths to produce two halves termed apical and basal pieces. These pieces may be grafted or kept separate. Grafted embryos developed normally, with the exception that they tended to **mature** earlier than uncut control embryos. If kept separate, the apices grew at rates similar to grafted apices, while the basal ends, behaving as if they had been released from an inhibition of growth, rapidly elongated and **matured** (e.g. produced root hairs and a root cap) 3-4 days earlier than uncut controls. Grafted embryos treated with the transport inhibitor **TIBA** (2,3,5-**triiodobenzoic** acid) had basal sections that behaved as if the sections had been kept separate. Additionally, resupplying IAA (indole-3-acetic acid) via a novel wick-bridge forced isolated basal pieces to behave as if the embryo apex were present. This apparent inhibition of root growth by the apex appears to be controlled by either the polar transport of auxin, and/or the accumulation of auxin at the root end. These experiments suggest that polar auxin transport has a greater influence on root, rather than on apex, development in these embryos.

DESCRIPTORS: DAUCUS-CAROTA GROWTH RATE POLAR AUXIN TRANSPORT

CONCEPT CODES:

02506 Cytology and Cytochemistry-Animal

11107 Anatomy and Histology, General and Comparative-Regeneration and Transplantation (1971-)

51000 Morphology, Anatomy and Embryology of Plants

51510 Plant Physiology, Biochemistry and Biophysics-Growth, Differentiation

53008 Horticulture-Vegetables

BIOSYSTEMATIC CODES:

26915 Umbelliferae

BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA):

Plants

Vascular Plants

Spermatophytes

Angiosperms

d ibib ab 16 1-4

L6 ANSWER 1 OF 4 CABA COPYRIGHT 2003 CABI DUPLICATE 1
 ACCESSION NUMBER: 2002:194381 CABA
 DOCUMENT NUMBER: 20023147080
 TITLE: Effect of anti-auxins on maturation of embryogenic tissue cultures of Nordmanns fir (*Abies nordmanniana*)
 AUTHOR: Find, J.; Grace, L.; Krogstrup, P.
 CORPORATE SOURCE: Cell & Tissue Culture Laboratory, Botanic Garden, University of Copenhagen, O. Farimagsgade 2 B, 1353 Copenhagen K, Denmark.
 SOURCE: Physiologia Plantarum, (2002) Vol. 116, No. 2, pp. 231-237. 25 ref.
 Publisher: Blackwell Publishing. Oxford
 ISSN: 0031-9317
 PUB. COUNTRY: United Kingdom
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The present study was conducted to improve the transition from proliferation to maturation in embryogenic cultures of Nordmanns fir (*Abies nordmanniana*). For that reason, chemicals reported to affect endogenous levels or activity of auxin were included in the growth media during maturation. The auxin antagonist **PCIB** reduced proliferation and promoted the development of numerous high-quality mature embryos in the tested cell lines. **PCIB** could not substitute for exogenously supplied ABA and the positive effect was only found when **PCIB** and ABA were used in combination. The effect of **PCIB** was dependent on the concentration and the application period. The auxin transport inhibitor TIBA also reduced proliferation, but had no positive effect on maturation. The auxin synergist phloroglucinol had the opposite effect of **PCIB**; proliferation was increased and no maturation was initiated. A lowered concentration of boron had no effect on proliferation but had some positive effect on maturation. The optimum protocol for **PCIB** application was strongly genotype dependent, and a general scheme that covered the tested cell lines could not be found. Overexposure to **PCIB** during maturation caused abnormal development of the mature embryos, which was revealed by a reduced number of cotyledons. These results suggest that endogenously produced auxin may be one reason for low or failing maturation of embryogenic cultures of Nordmanns fir, but also imply that auxin may play a critical role for proper development of cotyledons during the later stages of embryo maturation.

L6 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2001:315089 CAPLUS
 DOCUMENT NUMBER: 135:134731
 TITLE: Triiodobenzoic acid, an auxin polar transport inhibitor, suppresses **somatic embryo** formation and postembryonic shoot/root development in *Eleutherococcus senticosus*
 AUTHOR(S): Choi, Y. E.; Katsumi, M.; Sano, H.
 CORPORATE SOURCE: Research and Education Center for Genetic Information, Nara Institute of Science and Technology, Nara, Ikoma, 630-0101, Japan
 SOURCE: Plant Science (Shannon, Ireland) (2001), 160(6), 1183-1190
 CODEN: PLSCE4; ISSN: 0168-9452
 PUBLISHER: Elsevier Science Ireland Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB The effect of auxin polar transport inhibitor on **somatic embryo** development and postembryonic growth in Siberian ginseng

(*Eleutherococcus senticosus*) was examd. In the presence of 2,3,5-triiodobenzoic acid (TIBA), an auxin polar transport inhibitor, embryo formation from embryogenic cells was suppressed, while cell division was not affected. When globular embryos at different stages were transferred onto medium contg. TIBA, development of axial and bilateral polarity was suppressed in a stage specific manner. In abnormal embryos induced by TIBA, further development of shoot and root apical meristems and vascular differentiation was also suppressed. Thus, abnormal development of embryos induced by inhibition of auxin polar transport resulted in plantlets without shoots and roots.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 4 CABA COPYRIGHT 2003 CABI DUPLICATE 2
 ACCESSION NUMBER: 97:419 CABA
 DOCUMENT NUMBER: 960311870
 TITLE: Morphoregulatory role of thidiazuron: evidence of the involvement of endogenous auxin in thidiazuron-induced **somatic embryogenesis** of geranium (*Pelargonium x hortorum* Bailey)
 AUTHOR: Hutchinson, M. J.; Murch, S. J.; Saxena, P. K.
 CORPORATE SOURCE: Department of Horticultural Science, University of Guelph, Ontario N1G 2W1, Canada.
 SOURCE: Journal of Plant Physiology, (1996) Vol. 149, No. 5, pp. 573-579. 30 ref.
 ISSN: 0176-1617
 DOCUMENT TYPE: Journal
 LANGUAGE: English

AB Thidiazuron-induced **somatic embryogenesis** in hypocotyl cultures of geranium (*Pelargonium x hortorum* cv. Scarlet Orbit Improved) consists of an induction phase on 10 or 20 micro mol litre⁻¹ thidiazuron (TDZ) followed by an expression phase on a basal medium lacking growth regulators. The induction and development of **somatic embryos** were found to be closely related to levels of endogenous ad exogenous auxin. Inclusion of the auxin-action inhibitor, 2-p-(chlorophenoxy)-2-isobutyric acid (**PCIB**), and the auxin-transport inhibitor, TIBA, in a TDZ-induction medium decreased embryogenic response of the cultures by different mechanisms. The decrease of the embryogenic response in the presence of **PCIB** was accompanied by a corresponding decrease in endogenous levels of auxins, cytokinins, and ABA. These changes in the profiles of endogenous plant growth regulators were not evident when TIBA was used. High concentrations of exogenous IAA in the expression medium suppressed the development of **somatic embryos**. Although the precise mode of action of TDZ is unknown, it is suggested that TDZ modulates endogenous auxin metabolism during **somatic embryo** development in geranium hypocotyl cultures.

L6 ANSWER 4 OF 4 CABA COPYRIGHT 2003 CABI DUPLICATE 3
 ACCESSION NUMBER: 90:65379 CABA
 DOCUMENT NUMBER: 900734731
 TITLE: Inhibition of **somatic embryogenesis** in response to 2,3,5-triiodobenzoic acid and 2,4-dichlorophenoxyacetic acid in *Ipomoea batatas* (L.) Lam. cultured in vitro
 AUTHOR: Chee, R. P.; Cantliffe, D. J.
 CORPORATE SOURCE: Department of Vegetable Crops, University of Florida Institute of Food and Agricultural Sciences, Gainesville, FL 32611, USA.
 SOURCE: Journal of Plant Physiology, (1989) Vol. 135, No. 4, pp. 398-403. 17 ref.

ISSN: 0176-1617

DOCUMENT TYPE:

Journal

LANGUAGE:

English

AB In studies of the role of endogenous IAA transport in embryo development, embryogenic sweet potato callus was treated with 1-5 micro M solutions of 2,4-D, 2,3,5-triiodobenzoic acid (TIBA), 7-aza-indole (AZI) or p-chlorophenoxyisobutyric acid (**PCIB**). AZI and **PCIB** had no effect on morphogenesis. 5 micro M TIBA or 2,4-D inhibited embryo formation and promoted embryogenic callus growth. Embryo development was restricted to increasingly earlier stages, i.e. from the torpedo stage toward the pro-embryo stage, as TIBA concn was gradually increased from 0 to 6 micro M, or as 2,4-D was gradually increased from 0 to 5 micro M. TIBA specifically inhibited polar IAA transport, suggesting that embryo development could coincide with endogenous IAA transport and that, inhibition of embryogenesis from embryogenic calli by exogenously supplied auxins could be a consequence of the disruption by exogenous auxins of endogenous IAA efflux from embryogenic loci.

=> d his

(FILE 'HOME' ENTERED AT 19:52:32 ON 14 MAY 2003)

FILE 'COMPENDEX' ENTERED AT 19:55:56 ON 14 MAY 2003

SET PLURALS ON PERM

SET ABBR ON PERM

L1

599 S CONIFER

INDEX 'AGRICOLA, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHNO, CABA, CAPLUS, CBNB, CIN, CONFSCI, CROPB, CROPU, ESBIODASE, FEDRIP, FOMAD, FOREGE, FROSTI, FSTA, GENBANK, IFIPAT, INVESTEXT, LIFESCI, NAPRALERT, NTIS, PASCAL, PHIC, PHIN, PROMT, SCISEARCH, ...' ENTERED AT 20:05:00 ON 14 MAY 2003

SEA SOMATIC(W) EMBRYO?

2610 FILE AGRICOLA
662 FILE BIOBUSINESS
141 FILE BIOCOMMERCE
4677 FILE BIOSIS
1250 FILE BIOTECHNO
5678 FILE CABA
2954 FILE CAPLUS
1 FILE CBNB
15 FILE CIN
211 FILE CONFSCI
66 FILE CROPB
249 FILE CROPU
1619 FILE ESBIODASE
105 FILE FEDRIP
27 FILE FROSTI
61 FILE FSTA
22786 FILE GENBANK
131 FILE IFIPAT
7 FILE INVESTEXT
899 FILE LIFESCI
34 FILE NAPRALERT
30 FILE NTIS
3104 FILE PASCAL
6 FILE PHIN
50 FILE PROMT
4413 FILE SCISEARCH
1632 FILE USPATFULL
36 FILE USPAT2

1 FILE ANABSTR
 8 FILE CANCERLIT
 123 FILE CEABA-VTB
 1 FILE DDFU
 1 FILE DRUGU
 206 FILE EMBASE
 3 FILE IPA
 297 FILE MEDLINE
 29 FILE PIRA
 9 FILE REGISTRY
 172 FILE TOXCENTER
 4 FILE ULIDAT
 147 FILE DGENE
 59 FILE DPCI
 129 FILE EUROPATFULL
 218 FILE INPADOC
 1 FILE JAPIO
 319 FILE PAPERCHEM2
 5 FILE PATDPAFULL
 40 FILE PATOSEP
 66 FILE PATOSWO
 714 FILE PCTFULL
 2 FILE RAPRA
 182 FILE WPIDS
 182 FILE WPINDEX

L2 QUE SOMATIC(W) EMBRYO?

FILE 'CABA, PASCAL, BIOSIS, CAPLUS, AGRICOLA' ENTERED AT 20:17:38 ON 14
MAY 2003

L3 19023 S L2
 L4 195 S PCIB
 L5 10 S L3 AND L4
 L6 4 DUP REM L5 (6 DUPLICATES REMOVED)

=>